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**From:** Paddack, Mark [mpaddack@eaest.com]  
**Sent:** 7/11/2019 6:47:57 PM  
**To:** Shewmake, Kenneth [shewmake.kenneth@epa.gov]  
**Subject:** FW: Hexavalent Chromium Question  
**Attachments:** Hex Sediment Exceedances.pdf; Metal Exceedances.pdf; Table 2.pdf

Ken:

As requested, attached are the figures I developed for my own use for the Phase 1 sediment results (metals), and below is the communication that I sent to Dan Hinckley and Cynthia Cheatwood regarding the patterns I'm seeing for this data. I also had a couple of phone discussions with Dan, and he concurred with my logic, and agreed that the background sampling may strengthen there are no site-related risks associated with sediment.

I'll continue to send you the screening information that I have developed based on preliminary data as I'm able.

Thank You,  
Mark Paddack  
EA Project Manager

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**From:** Paddack, Mark  
**Sent:** Friday, June 28, 2019 12:48 PM  
**To:** Hinckley, Dan; Cheatwood, Cynthia  
**Subject:** RE: Hexavalent Chromium Question

Please see the attached and let me know if you agree or disagree with my logic:

1. I prepared the metals figure before factoring in increasing the arsenic Residential Soil RSL from .68 to 6.8; as such, there are a few arsenic detections slightly above this screening criteria.
2. Manganese and lead exceedances are widely distributed. However, if you refer to the attached metals map, sample location LSED-13 is slightly upstream from the site and LSED-14 is definitely upstream from the site (the east stream flows from northwest to southeast), and both the sample locations displayed lead exceedances, and LSED-13 also manganese.
3. The site is in an urban setting (South Dallas) and these streams catch storm runoff from developed areas (roads, parking lots, etc.) so I'm thinking the lead is related to background (note at LSED-14 lead is 69.4 and at LSED-20, the furthest downstream sample, lead is 72.7). TCEQ background samples SE-01 and SE-02, displayed lead results of 26.8 and 30.2, which are (slightly) below the ecological screening value (these background sample locations can be seen in the small inset that shows them in reference to the site; the Table that includes results for these samples is attached).
4. I'm thinking the manganese is naturally occurring, as TCEQ background samples SE-01 and SE-02, manganese was at 625 and 501, respectively, which is similar to the RI sample results.
5. There are a few other sporadic exceedances of other metals, such as selenium, nickel, cobalt, and zinc. But there is not a distribution that would suggest these are widespread contaminants.
6. There is only one location (LSED-09), where both chromium and hexavalent chromium exceed screening values.
7. I also put footnotes under the legend on the metals map that include the maximum detections for aluminum, copper, and mercury. None of the detections exceeded screening levels.

The EPA has scoped doing a background sediment and surface water investigation, and my thoughts are to sample at four locations further north in the creek to the east, and four further west in the creek to the south, and hopefully this will strengthen the argument that the lead is background in an urban setting, and that further downstream sediment sampling is not warranted.

Please provide me your thoughts. Also, as it stands right now, approximately 30 sediment samples (20 RI and 10 TCEQ) have been collected in the area east, south and downstream from the site. Will that be enough samples for the risk assessments if a decision is made to not collect at additional locations? Also, given these site conditions (one chromium location, and lead possibly background) are additional AVS/SEM samples at existing locations warranted if a decision is made to not do additional sample locations? Right now, there are only two locations (LSED-01 and LSED-09) where AVS/SEM and TOC were collected and analyzed.

Also – the project number (for your assistance) is:

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Thanks,  
Mark

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**From:** Hinckley, Dan  
**Sent:** Friday, June 28, 2019 11:59 AM  
**To:** Paddack, Mark; Cheatwood, Cynthia  
**Subject:** RE: Hexavalent Chromium Question

Mark,

This is not too much of a surprise for me, sediment rarely (if ever) has popped for human health. Ecological risk is another story though, particularly for metals, which as we know are the primary COCs for the site.

Dan

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**From:** Paddack, Mark <mpaddack@eaest.com>  
**Sent:** Friday, June 28, 2019 12:56 PM  
**To:** Cheatwood, Cynthia <ccheatwood@eaest.com>; Hinckley, Dan <dhinckley@eaest.com>  
**Subject:** RE: Hexavalent Chromium Question

Cynthia:

I appreciate the prompt response. In doing a quick screening exercise for Lane Plating sediment, its looking like I may not have to continue chasing sediment. I'll forward some (primitive) maps to illustrate my thoughts, and see what you all think.

Thanks!  
Mark

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**From:** Cheatwood, Cynthia  
**Sent:** Friday, June 28, 2019 11:52 AM  
**To:** Paddack, Mark; Hinckley, Dan  
**Subject:** RE: Hexavalent Chromium Question

That is correct for sediment. Since sediment has lower contact than soil, it is appropriate to increase the soil RSL by a factor of 10.

Cynthia Cheatwood, MSPH

Senior Engineer/Risk Assessor

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**From:** Paddack, Mark <[mpaddack@eaest.com](mailto:mpaddack@eaest.com)>

**Sent:** Friday, June 28, 2019 12:48 PM

**To:** Cheatwood, Cynthia <[ccheatwood@eaest.com](mailto:ccheatwood@eaest.com)>; Hinckley, Dan <[dhinckley@eaest.com](mailto:dhinckley@eaest.com)>

**Subject:** Hexavalent Chromium Question

Cynthia/Dan:

Kim had told me that when hexavalent chromium in sediment is being screened, the residential soil RSL (0.3 mg/kg) should be increased by a factor of 10, which would be a screening value of 3 mg/kg. I was just wanting to confirm if that is correct.

Thanks,  
Mark